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ABSTRACT

This study examined the relationship between academic delay of gratification (ADOG) and college students' use of action control. College students (n=113) at a large midwestern university completed the academic delay of gratification scale developed by the authors and the motivated strategies for learning questionnaire, which included an adaptation of the behavioral component of Kuhl's action control scale which assesses an individual's tendencies to control his/her actions in order to meet goals. The study found a significant correlation between the ADOG scale and the action control scale, supporting the view that delay of gratification can be considered a volitional strategy, which along with other self-regulating strategies is important for successful academic performance. Both ADOG and action control were significantly correlated to students' motivational tendencies and use of cognitive, metacognitive, and other self-regulatory strategies. The ADOG scale is appended. (Contains 16 references.) (DB)

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Academic Delay of Gratification as a Volitional Strategy

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Abstract

We examined the relationship between academic delay of gratification (ADOG) and students' use of action control. College students (N = 113) completed the Bembenutty and Karabenick Academic Delay of Gratification Scale (ADOGS) and the Motivated Strategies for Learning Questionnaire, which included an adaptation of the behavioral component of Kuhl's action control scale. A significant correlation between the ADOGS and action control supported the view that delay of gratification can be considered a volitional strategy, which along with other self-regulating strategies is important for successful academic performance. Both ADOG and action control were significantly correlated to students' motivational tendencies and use of cognitive, metacognitive, and other self-regulatory strategies.

Skillful self-regulated learners are successful, in part, because they are able to use a number of strategies to achieve academic goals (Schunk & Zimmerman, 1997; Zimmerman, 1998). Among these strategies is volitional control, which can be defined as the "tendency to maintain focus and effort toward goals despite potential distractions" (Corno, 1993, p. 14; also see Corno, 1989; García et al., 1997; Snow, Corno, & Jackson, 1996). Volition is central to Kuhl's theory of action control, which encompasses the activation of motivational, cognitive, and behavioral processes necessary to ensure that goals are obtained (Kuhl, 1985). Kuhl's theory involves both action and state orientations. Action orientation refers to the effective use of self-regulation, metacognition, and behavior in the pursuit of goals, whereas state orientation refers to a focus on past difficulties and failures (Beckmann & Irle, 1985). Further, Kuhl (1985) suggests that when individuals experience internal or external distraction from enacting intentions, there are several self-regulatory strategies, including selective attention and the control of encoding, motivation, emotion, the environment, and information-processing that will help them to remain task focused. Kuhl has developed the Action Control Scale (ACS; Kuhl, 1994) to assess individuals' action control tendencies, which include cognitive and behavioral dimensions.

Volition (i.e., willpower) is essential to Mischel's (1996) social cognitive analysis of delay of gratification. In particular, Mischel frames delay of gratification within cognitive-affective system theory, which refers to the interaction between the person's construal of situations and cognitive-affective mediating units (Mischel & Shoda, 1995). According to this approach, individuals are able to use diverse strategies, such as delay of gratification to facilitate the implementation of intentions and goals (Mendoza-Denton, Ayduk, Shoda, & Mischel; Mischel & Shoda, 1995; 1998). For example, a student who in preparation for an exam selects a less distracting setting in which to study is exerting control over environmental conditions in order to decrease the likelihood of interference with effective cognitive activity. Students may be required to exert additional control when alternatives to studying become available. Alternatives to academic goals are attractive, in part, because they offer immediate gratification, in contrast to rewards for academic goals (e.g., grades, degrees) that are temporally remote. More successful students are those who delay gratification.

Pervin (1991) suggested that there is a relationship between delay of gratification and action control because, in the event of competing goals, an action may need to be delayed. However, the relationship between action control and delay of gratification has only recently been appreciated (Mischel, Cantor, & Feldman, 1996), and there have been no studies that have directly examined the nature of this relationship. The present study does so by assessing both action control and delay of gratification in an academic setting. To accomplish this, we used the Academic Delay of Gratification Scale (ADOGS; Bembenutty & Karabenick,1996; 1997), which presents students with a series of choices between pursuing temporally distant but valuable academic goals and attractive alternatives that are immediately available but less likely to result in obtaining academic success.

In order to place the relationship between action control and academic delay of gratification (ADOG) in the broader context of students' self-regulation, we also

assessed other student characteristics that are associated with academic performance. As operationalized by the Motivated Strategies for Learning Questionnaire (MSLQ; Pintrich, Smith, García, & McKeachie, 1993), this includes self-efficacy, task value, and intrinsic motivation, as well as the use of elaboration and metacognitive strategies, and student self-regulation (e.g., effort control, peer learning, and time/study environment). In general, we would expect that student motivation and use of strategies that facilitate student performance would be directly related to both action control and delay of gratification. For example, students who are more intrinsically motivated, who use more metacognition, and who exert more effort on difficult tasks are predicted to exert control by establishing a study schedule and to postpone social activities that preclude studying. We also expected that action control and delay of gratification would be related to student performance.

Method

Participants were 49 male and 64 female student volunteers enrolled in one of six introductory courses at a large Midwestern university during the Spring of 1997. The sample was predominantly Caucasian (69) with 40 students from other ethnic groups. Participants completed the ADOGS (see appendix; Bembenutty & Karabenick, 1996). The ADOGS, which has shown evidence of both validity and reliability (Cronbach alpha = .71 for the present study), presents students with 10 choices between options that offer more immediate gratification, such as "Go to a party the night before a test for this course" and options with relatively delayed gratification (academic), such as "Study first and party only if you have time." Students responded on a four point scale: *Definitely choose A, Probably choose A, Probably choose B, and Definitely choose B.* Overall delay preference consisted of the total of the 10 items scored so that higher values indicate greater delay preference.

Participants also completed a modified version of the Motivated Strategies for Learning Questionnaire (MSLQ; Pintrich, Smith, García, & McKeachie, 1993). The MSLQ uses a 5-point Likert-type response format of *Not at all true of me* to *Very true of me*. In addition to assessing students' motivational tendencies and use of cognitive and metacognitive learning strategies, this 87-item version of the MSLQ included action control and other dimensions of student self-regulation: effort control, peer learning, and time and study environment management. An example from the intrinsic goal orientation scale is "I am interested in this course." An example of the scale to measure use of elaboration learning strategies is "After reading a chapter I review it to be sure I understand everything." An example of effort regulation is "Even when the course materials are dull and uninteresting I manage to keep working until I finish." The action control scale (Cronbach alpha = .57 for the present study), is based on the behavioral component of the more extended action control scale of Kuhl (1985). An example is "I write down contracts for myself promising to do needed tasks on a certain date," which describes how a learner structures tasks and specifies intentions to accomplish them. All items on the ADOG and MSLQ were course-specific, that is, designed to refer to the specific course in which the students were enrolled. We also included students' course

grade coded as E = 1 ... to A = 11, which was standardized to control for between classroom differences in grading.

Results and Discussion

As shown in Table 1, as expected, ADOG was significantly related to action control ($r = .21$, $p < .05$). Thus, the more that students indicated they would delay immediate gratification in order to pursue more valuable but temporally remote academic goals, the more they tended to perform such actions as making self-contracts and promises to complete academic tasks within certain time frames. In the present study, however, only ADOG was significantly related to student performance ($r = .29$, $p < .01$). With respect students' motivational tendencies, both ADOG and action control were significantly related to task value and expectancy of success. However, only ADOG was correlated with intrinsic interest in the course, and only action control was significantly correlated to self-efficacy. There were no significant correlations between either ADOG or action control and extrinsic motivation, text anxiety, facilitative anxiety, and social desirability.

Among students' use of learning strategies, both ADOG and action control were significantly related to elaboration, rehearsal, metacognition, and conditional knowledge. In addition, only action control was related to organization, attention, and retrieval of information. Neither ADOG nor action control were significantly correlated to critical thinking. Finally, students' use of all self-regulatory strategies, with the exception of peer learning, were significantly correlated to both ADOG and action control.

Most important, the results support the hypothesized relationship between delay of gratification and action control, and thus the notion that delay of gratification should be viewed as part of the volitional network that students activate to secure intentions. The findings are consistent with Mischel's (1996) analysis of delay of gratification, originally conceived within social cognitive theory, which is now viewed as a manifestation of student willpower. For learners, it is important not only that they structure tasks and establish the intention to accomplish them, but also that they choose to postpone immediate gratification to achieve their academic goals. The results also indicate that increased delay of gratification is related to the more frequent use of self regulation of effort, and time and study management, which describe behaviors dedicated to structuring and controlling conditions to maximize successful academic outcomes. Conversely, students who are higher in their preference for immediate gratification are less likely to be successful.

These results also show that students who preferred delay (as well as action control) were also more likely to report using learning strategies of elaboration, rehearsal and metacognitive self-regulation, which is consistent with previous findings (Bembenutty & Karabenick, 1996). These results also support Kuhl's (1985) emphasis on the mediational role of cognitive processes and motivational tendencies in volition. In fact, ADOG and action control have similar relations with many of the same learning strategies and motivational tendencies, although not with all of them. Nevertheless, these findings serve to establish academic

delay of gratification as an important volitional strategy useful to protect intentions from distracting tendencies while academic goals are pressing. It should be noted that the present study used only the behavioral components of action control. Additional research is suggested that also assesses cognitive and emotion components of action control, as well as to determine whether these results generalize to other course content areas.

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Table 1

Descriptive Characteristics and Relationship Between Academic Delay of Gratification (ADOG) and Action Control to Students' Motivational, Cognitive , and Self-regulatory Learning Strategies (N = 113)

Scale	ADOGS	Action Control	α	*M*	*SD*
ADOG		.21*	.71	3.03	.48
Action Control			.57	2.69	1.02
Motivation					
Intrinsic Motivation	.26**	.03	.75	4.32	.64
Extrinsiç Motivation	.11	.09	.57	3.75	.94
Task Value	.22*	.22*	.96	4.05	.98
Self-Efficacy	.11	.26**	.66	4.09	.84
Expectancy of Success	.23*	.25**	.92	3.96	.99
Test Anxiety	.02	-.01	.76	2.68	1.10
Facilitative Anxiety	-.06	.10	.69	2.71	.73
Social Desirability	-.13	-.10	.36	2.67	.95
Cognitive Strategies					
Elaboration	.50***	.35***	.72	3.10	.74
Organization	.18	.33***	.32	3.36	.76
Retrieval	.04	.32**	.32	3.10	.91
Rehearsal	.28**	.34***	.80	2.55	1.43
Critical Thinking	.18	.14	.69	3.12	1.05
Metacognition	.37***	.45***	.68	3.36	.82
Conditional Knowledge	.26**	.33***	.70	3.46	.94
Attention	.01	.24*	.36	2.89	.89
Self-regulatory Strategies					
Peer Learning	-.12	.16	.86	2.05	1.11
Effort Regulation	.23*	.31**	.25	4.06	.99
Study Environment	.29**	.33***	.82	3.93	1.02
Time Management	.37***	.46***	.58	3.11	1.17
Final Course Grade	.29**	.08			

*$p < .05$ **$p < .01$ ***$p < .001$

Appendix

Academic Delay of Gratification Scale (ADOGS)

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1. A. Go to a favorite concert, play, or sporting event and study less for this course even though it may mean getting a lower grade on an exam you will take tomorrow, *OR*
   B. Stay home and study to increase your chances of getting a higher grade.

2. A. Study a little every day for an exam in this course and spend less time with your friends, *OR*
   B. Spend more time with your friends and cram just before the test.

3. A. Miss several classes to accept an invitation for a very interesting trip, *OR*
   B. Delay going on the trip until the course is over.

4. A. Go to a party the night before a test for this course and study only if you have time, *OR*
   B. Study first and party only if you have time.

5. A. Spend most of your time studying just the interesting material in this course even though it may mean not doing so well, *OR*
   B. Study all the material that is assigned to increase your chances of doing well in the course.

6. A. Skip this class when the weather is nice and try to get the notes from somebody later, *OR*
   B. Attend class to make certain that you do not miss something even though the weather is nice outside.

7. A. Stay in the library to make certain that you finish an assignment in this course that is due the next day, *OR*
   B. Leave to have fun with your friends and try to complete it when you get home later that night.

8. A. Study for this course in a place with a lot of pleasant distractions, *OR*
   B. Study in a place where there are fewer distractions to increase the likelihood that you will learn the material.

9. A. Leave right after class to do something you like even though it means possibly not understanding that material for the exam, *OR*
   B. Stay after class to ask your instructor to clarify some material for an exam that you do not understand.

10. A. Select now an instructor for this course who is fun even though he/she does not do a good job covering the course material, *OR*
    B. Select an instructor for this course who is not as much fun but who does a good job covering the course material.